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Original Articles.

A Symposium on Goitre.

SURGICAL ANATOMY OF THE THYROID GLAND.

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The Thyroid Gland, its functions and diseases, has occupied the attention of clinicians and research men since the middle of the 19th century. From 1800 to 1850 Exophthalmic Goitre was observed and described by Parry, Graves and Basedow. Little scientific knowledge as to the gland's functions or as to the treatment of its diseases except symptomatic, was inaugurated during these years, however.

It is to Kocher, who operated 70 cases of simple goitre before 1850, that we must give credit for suggesting surgical treatment for diseases of the thyroid gland. Since that time, Kocher, Chas. Mayo, Cryle and many others have placed Hyperthyroidism so securely on its surgical pedestal, that excepting those transitory cases appearing at puberty and pregnancy and other cases that yield in a reasonably short time to internal treatment, the majority of practitioners agree that the successful treatment is surgical.

The relative anatomy of this gland is of special importance to the surgeon. Asepsis and Antisepsis have removed many of the dangers of surgery. But here, even with our present instinctive asepsis, knowledge of the intricate anatomy of this particular region is absolutely necessary, for the dangers and complications following faulty dissection and improper technique cannot be remedied.

The Thyroid is a dark red, ductless gland situated at the upper part of the trachea. It consists of two lateral lobes, which extend from the oblique line on the ala of the thyroid cartilage down to the 5th or 6th tracheal ring, and an isthmus from ¼ to ¾ inches broad which connects the lateral lobes at about the 2nd or 3rd trachael ring. These lobes are about two inches long and somewhat smaller at their upper poles. The right is usually larger than the left. Its weight is from 1 to 1½ ounces.

The gland is covered by a thin close fitting fibrous capsule, which passing behind the organ, splits into three layers. One portion closely

investing the posterior surface and passing to the interior as trabeculae, dividing the gland into its component histological parts.

Another layer passes behind the esophagus and still another passes between the trachea and esophagus. This close investment of gland trachea and esophagus explains the pressure symptoms in cases of hypertrophy or tumor formations of the gland.

The gland is also tightly bound to the anterior surface of the trachea by fibrous bands explaining its movement upon swallowing.

The trabeculae which dip into the posterior part of the organ carry the lymph channels and blood vessels of the gland.

We have evidence in the atrophic thyroglossal duct, foramen caecum at the base of the tongue, and occasionally the pyramidal process or middle lobe, that sometime in the prehistoric evolution of man, this was not a ductless gland, but rather a secreting, excreting organ emptying its contents into the upper alimentary tract. We have the same condition shown in early embryonic life.

The gland appears very early in the embryo. It is formed from three buds, probably of branchial cleft origin. The median bud develops between the two halves of the tongue and grows down the neck as a tube—the thyroglossal duct. At the 5th week the hyoid bone develops and crosses and divides this tube. The upper portion disappears leaving only the foramen caecum, a blind pouch at the posterior angle of the circumvallate papillae.

The lower portion of this duct develops into the upper lobes and isthmus of the gland, sometimes leaving the pyramidal process as a remnant. At the 7th week the lower lateral lobes have developed from lateral buds from the 4th branchial clefts, and united with the rest of the organ. This union occasionally does not take place and the gland at operation is composed of two or more units.

Relations of the gland:

Anteriorly the gland is covered by the Sterno-Hyoids, Sterno-Thyroids, Omo-Hyoids and slightly overlapped by the anterior borders of the Sterno-Mastoids. *Laterally* in its normal state its outer edges usually lie just inside the sheaths of the great vessels of the neck. The uper lobes lie between the Sterno-Thyroids in front and the inferior Constrictor of the Pharynx behind. The inferior Constrictor with its origin on the ala separates gland from cartilage. *Posteriorly* the gland embraces the trachea and larynx reaching back nearly to the pharynx and on the left side to the esophagus.

The Recurrent Laryngeal Nerve and branches of the inferior artery are at the posterior surface of the gland.

Blood supply:

The blood supply of the thyroid, considering its size, is remark-

able for its extent, and freedom of anastomosis. The vessels supplying the organ are the two Superior Thyroids, two Inferior Thyroids and sometimes the Thyroidea Ima. The Superior Thyroid is given off the External Carotid before the Lingual at a point just below the level of the Hyoid bone. Very superficial at its origin it courses upward and inward, then downward and inward beneath the Omo-Hyoid, Sterno-Hyoid and Sterno-Thyroid to the upper and inner part of the Superior lobe where it divides and enters the capsule. This is the artery which is often said to hold the key to the situation, for in ligation, frequently some of the fibres of the omo-hyoid are included, which later give way upon movement of the neck and allow serious or fatal hemorrhage. The Superior Laryngeal Nerve is in close relation with this artery.

The Inferior Thyroid Artery, the larger of the two, is one of the three branches of the Thyroid axis, arising farther down the neck from the Subclavian. Its course from the level of the lung apex is upward behind the Common Carotid, Internal Jugular vein, Pneumo gastric nerve, inward to the posterior surface of the lower lobe of the thyroid gland. Coursing with this artery as it nears the gland is the Recurrent Laryngeal nerve on its way behind the gland to the Larynx. It must be separated before ligation of the artery or ligation be done at a point distal to the Inferior Laryngeal branch of the Inferior Thyroid.

The Thyroidea Ima, an inconstant artery, arises from the Brachio-Sephalic and runs upward along the surface of the trachea to supply the isthmus. Its possible presence must be remembered in extirpation or low tracheotomy.

The return blood supply is cared for by the three sets of veins, viz.: Superior, Middle and Inferior Thyroids. They anastomose freely with each other and with those of the opposite side, forming frequently a perplexing plexus on the surface of the gland.

The Superior Thyroid Vein, corresponding to the artery of that name, collects the blood from that region of the lobes and after crossing the upper end of the common Carotid Artery empties into the Internal Jugular or Common Facial vein.

The Middle Thyroid emerges from the lower part of the lower lobe, crosses the Common Carotid and empties into the Internal Jugular just below the level of the Cricoid Cartilage.

The Inferior Thyroid veins drain the lower parts of the organ and descend one on either side of the trachea, the left to empty into the Left Brachio-Cephalic, the Right into the angles of the Right and Left B. C. or lower part of the Left Brachio-Cephalic Vein.

They anastomose frequently after leaving the gland and receive

the Inferior Laryngeal, Tracheal, and Esophageal to form an intricate plexus on the surface of the trachea, sometimes embarrassing in a low tracheotomy.

The enervation is scanty and entirely from the Middle and Inferior Cervical Ganglia of the Sympathetic System.

The Middle Cervical Ganglion on or near the Inferior Thyroid Artery opposite the 6th or 7th vertebra sends a few fibres which follow this artery to supply the gland.

The Lymphatics are abundant, for it is through this system that the larger part of the secretion reaches the general circulation.

Those of the upper part of the gland drain into the Upper Deep Cervical Glands; those of the lower lobes into the Lower. The Deep Cervical Glands are two chains of Glands running along the Internal Jugular veins and drain into the Mediastinal and Axillary Lymph Glands.

This fact in the Anatomy of the neck is of importance in operating malignant tumors of the gland.

The Lymph nodes are sometimes difficult to distinguish from the Para-Thyroids on account of the inconstant positions of these delicate and important bodies. However, the difficulty is not of so much importance in most cases as improved technique, and leaving the posterior part of the capsule seldom injures or removes them.

The Para Thyroids are four little gland like structures, ovoid in shape, usually behind the gland, two on each side. The upper ones are usually near the Superior Thyroid Artery and the lower ones near or behind and below the Inferior Thyroid Artery. They may be located at any point between the poles, increased or decreased in number, and are sometimes enclosed in the capsule. Their complete removal or injury sometimes results in fatal tetany.

UNNECESSARY NOISES.

The celebrated soprano was in the middle of her solo when little Johnnie said to his mother, referring to the conductor of the orchestra, "Why does that man hit at the woman with his stick?"

"He is not hitting at her," replied his mother, "Keep quiet."

"Well then, what is she hollerin' so for?"

—*The Conductor.*

If suppuration at the root of the nail does not soon subside after providing drainage, it may be necessary to remove the nail. This should not be done too hastily, however. Persistence in daily disinfection of the space (iodine, hydrogen peroxide, etc.) and stimulation of the tissues (as by massage) will often be rewarded by saving the nail.

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PATHOLOGY OF GOITRE.

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The Pathological Anatomy of Goitre does not properly include the pathology of the thyroid in which there is no goitre but mention may be made of some congenital defects and malformations. A part or all of the gland may be absent at birth. One lobe or a lobe and the isthmus, or the isthmus alone may be wanting. Certain cases show a complete absence of the gland resulting in cretinism or infantile myxoedema. There are also variations in the location of the gland, as substernal etc. There may be aberrant thyroids in the region of the hyoid, at the base of the tongue, within the larynx or trachea and so on. These are defects of development which may under certain conditions prove of a serious nature.

Acute inflammation of the thyroid is said to be rare. When it does occur it is usually the result of infection and ends in abscess. Chronic inflammation with atrophy of the glandular tissue proper, and an increase of the interstitial connective tissue producing a sclerosis is occasionally met with. This usually results in "hypothyroidism" and more or less evidence of myxoedema.

The most common departure from the normal in the thyroid is "Goitre." The term Goitre is used to designate any enlargement of the gland and includes different pathological conditions.

Sarcoma of the thyroid is rare. It is usually primary and of rapid growth, early breaking its capsule and spreading through surrounding tissue.

Carcinoma is seen more frequently than Sarcoma but is not very common. It runs a course similar to Carcinoma in other parts.

The diagnosis of malignant disease from other enlargements may usually be made by the rapid growth, the adhesion of the skin and surrounding tissue making the tumor less movable than ordinary Goitre.

Cysts of the thyroid form a large part of the Goitre cases we see. They are formed by a stretching of one or more of the alveoli, by the accumulation of Colloid forming Colloid cysts, or by hemorrhage into the substance of the gland resulting in a blood cyst. Many cases are combinations of colloid and blood, the one or the other predominating according to the conditions prevailing at the time of development.

The ordinary Colloid Cystic Goitre results from the accumulation of colloid material in one or more alveoli as stated above. It often happens that the septa, or walls separating the alveoli, are broken down and thus the spaces are thrown together at times forming large sized cavities filled with Colloid. At first the walls of such Cysts are thin but as they grow, more connective tissue seems to develop in the Cap-

sule or what is more likely the surrounding connective tissue is packed together forming quite a dense Capsule. Hemorrhagic Cysts result from hemorrhage into an alveolus or several alveoli breaking down the septa. The Capsule is formed in the same way as in Colloid Cysts. The contents are sometimes almost pure blood, at other times almost pure Colloid with only a small amount of blood or any proportion of Colloid and blood may be found.

Some enlargements of the thyroid are almost entirely vascular in nature. They are made up of large dilated veins which pulsate. The walls of these vessels are exceedingly thin and bleed very freely after the slightest injury. Again there is enlargement of the gland with a network of enlarged arteries and veins on the surface giving to the touch the sense of vascular growth, and often a pulsation simulating aneurysm. It should be noted that the majority of Goitres are very vascular as is also the normal thyroid gland, which is supplied by four and at times five large arteries, a remarkable arrangement for an organ of its size.

Probably more interesting than that of other forms of Goitre is the Pathology of "Exophthalmic Goitre." The pathology of exophthalmic goitre may be likened to a moving picture show; it changes more or less rapidly. The condition found in the early stages differs materially from that found at the height of the disease and again the terminal stage shows a picture quite different from either of the above. These changes are not sudden but there is a gradual transition from one to the other. The normal thyroid gland consists of a reticulum of connective tissue holding together a large number of thin walled alveoli which are lined by a single layer of columnar epithelium which is the secreting organ. Between and surrounding these alveoli are net works of capillary vessels and lymphatics.

In health and during moderate stimulation this condition is maintained with a small amount of stainable Colloid material occupying the follicles or alveoli. With the onset of Exophthalmic Goitre and before there is any manifestation of the disease there is an increase in the secreting surface and secreting activity of the gland. The increase of secreting surface may arise in one of two ways or in a combination of both. In the first there is enlargement of the alveoli and an infolding or reduplication of the alveolar lining giving a great increase in the number of secreting cells. The cells also become larger and more succulent, the secretion is thinner, more readily absorbed and does not take stains. In the second form there is an increase in the number of alveoli and a corresponding increase of secretion which also is thinner and does not take stains. In either case the gland is more or less enlarged according to the increase of tissue elements. At first this pro-

liferation may not affect more than a few of the alveoli but progressively more and more are involved as the disease develops until a large part or all the gland is included. It is at this time when a large number of follicles are filled with active, secreting, nearly normal cells that we have the fully developed symptoms of rapid heart, exophthalmos, tremor etc. About this time degeneration of the epithelia in some of the alveoli begins. The cells become flattened, pavement-like, and lose their ability to secrete. The cell layer becomes detached from the basement membrane beneath and the space is eventually filled with colloid and detritus consisting of detached cells. This degeneration may have already begun in certain areas when the disease is at its height and while proliferation is going on in other parts of the gland. The process is progressive and affects one follicle after an other until all those originally affected degenerate. In this terminal stage we may have some parts of the gland normal containing normal secretion and the remainder consists of connective tissue of increased quantity holding together large numbers of alveoli filled with a gelatinous material and expoliated epithelia, but devoid of function.

While the disease is advancing and new follicles are proliferating, the symptoms of the disease are becoming more marked. The height of the disease is reached when the largest number of alveoli are involved or at least when the highest balance of active secreting cells are found with beginning degeneration on one hand and proliferation on the other. From this time on degeneration goes on more rapidly than proliferation and the symptoms begin to abate. If all or nearly all the alveoli of the gland have been involved, it may not have enough secreting surface to prevent the development of Myxoedema, a not unusual condition following exophthalmic goitre. There may at the same time be a goitre of greater or less dimensions but without function, consisting as stated above of cysts filled with gelatinous material, colloid and detritus.

STOPPED JUST IN TIME.

Little Johnnie, who had been praying for some months for God to send him a baby brother, finally became discouraged. "I don't believe God has any more little boys to send," he told his mother, "and I'm going to quit it."

Early one morning not long after this he was taken into his mother's room to see twin boys who had arrived in the night. Johnnie regarded them thoughtfully for some minutes. "Gee," he remarked finally, "it's a good thing I stopped praying when I did."

—*The Conductor.*

THE DIAGNOSIS OF HYPERTHYROIDISM.

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If the younger members of the profession, younger in number of years of practice,—that is,—should wait to write papers upon different medical topics until they could do so from their wealth of experience, we should indeed be silent members of the society. So it is, that the writer takes up this topic of, "The Diagnosis of Hyperthyroidism," and gives due credit to Osler, and to Thompson, in their works on "The Practice of Medicine," but especially to Ochsner and Thompson, whose chapter on this subject, in their book entitled, "Thyroid and Parathyroid Glands," is most comprehensive.

A simple Goitre moves upward with the larynx in the act of swallowing, which helps to differentiate this tumor mass from a branchial cyst, enlarged lymph nodes, lipoma, lympho-sarcoma, and carcinoma.

The branchial cyst fluctuates, and below it may be felt the normal thyroid gland.

Enlarged lymph nodes parallel the borders of the sterno cleido mastoid muscle, or are near the sites of the different salivary glands.

Lipoma begins, usually, on the back of the neck, dissecting downward and forward.

Lympho-sarcoma, while in front of the sterno cleido mastoid, as a rule, does not move upward with the act of swallowing.

Carcinoma is secondary to carcinoma of the pharynx, larynx, tongue, etc.

A simple goitre may at any time develop into the exophthalmic type. Added to the enlargement of the thyroid gland in hyperthyroidism, called Graves', Basedow's or Parry's disease, we usually have exophthalmos. The goitre may be small enough to evade the notice of the examiner. Why then should there be such a variety of symptoms? According to Moebius, the disease is a condition due to an increased pathological activity of the thyroid gland. When we realize therefore, what small doses we give of some of the more powerful drugs, and the marked results, does it not seem reasonable that, though the thyroid gland may be ever so slightly enlarged, yet even a small increase of the secreting portion of the gland may throw enough thyroid extract into the circulation to poison the system, and account for the varied symptoms?

The exophthalmos may vary from a slight protrusion of one, usually both, eye-balls, to an actual dislocation of the eye-ball. Many theories have been advanced as to the cause of this condition, such as: An increased amount of fat in the back of the orbit; dilatation of the blood vessels, crowding the bulb forward; and "hypotonia of the ocular

muscles, especially to the weakness of an unstriped cylinder formed muscle described by Landstrom, which muscle has formerly been overlooked by anatomists and clinicians as well as pathologists."

In connection with the protrusion of the eye-ball it is well to note that there are a number of signs or symptoms. Graefe noted that often one of the first symptoms of the disease is elicited when the eye-ball is rotated downward. The upper lid does not follow as it normally does, but lags behind, exposing some of the sclerotic below the lid.

Stellwag's sign notes the fact that the palpebral aperture is wider than in health, owing to the retraction, or spasm of the upper lid. There is also a marked decrease in the frequency of winking.

Joffroy's sign consists in the fact that upon looking upward, if the head is held down, there is a wrinkling of the forehead.

Moebius' sign shows that there is a diminution in the power of convergence during accommodation.

Added to the two prominent symptoms, goitre and exophthalmos, in Graves' disease we have another cardinal symptom,—tachycardia. The pulse rate may vary from 90 to 150, rarely to 200 beats per minute. Authorities now agree upon the diagnosis of Exophthalmic Goitre when either of the first named symptoms are present with tachycardia. Even supposing there is neither exophthalmos nor goitre evident, "If there is tachycardia present which cannot be explained upon another pathological theory some clinicians insist upon the diagnosis of hyperthyroidism, if there are other symptoms of the disease."

It must be remembered that the size of the gland, also the severity of the symptoms may vary from time to time, probably due to mental as well as physical influences, such as shock, worry, fatigue, etc.

Among the minor symptoms that should be mentioned are tremor, and muscular weakness. The tremor consists of eight or nine oscillations per second, and may affect the whole body or the extremities. It is sometimes classed as a fourth cardinal symptom. Muscular weakness is always present in advanced cases. This may be evidenced simply by the patient becoming unduly fatigued upon slight exertion, or "may result in the sudden giving away of a group of muscles, so that the patient may suddenly drop things, or fall to the ground."

Oschner notes the following minor symptoms:

Nervous excitability, mental deficiency, vertigo, paroxysmal dyspnoea.

Intermittent vomiting, diarrhoea, sweating or mental depression without apparent cause.

Increase of the gravity of the symptoms upon psychic excitation, mental or physical fatigue, administration of thyroid extract or iodine.

Emaciation and anaemia in advanced cases.

Increased lymphocytosis; decreased polymorphonuclear leucocytosis.

Oedema of upper and lower eyelids, later of the feet.

Visible pulsations in the goitre.

Others cite such symptoms as: headache, insomnia, aphonia and cough, due to pressure of the goitre; increase of temperature; loss of flesh; scleroderma; bronzing of the skin, and possibly urticaria.

From all these we see how many minor symptoms must be thought of. But still we look for one of the three cardinal symptoms, exophthalmos, goitre, or tachycardia, and if one or more of the minor signs are also present, we make our diagnosis of hyperthyroidism.

POTT'S DISEASE.

E. A. Hibbs, New York (Journal A. M. A., August 10), describes an operation for immobilization of the diseased vertebra as a curative measure in Pott's disease. It consists in anchylosing the vertebra by careful removal of the periosteum of the spinous processes and the laminae, with the spinous processes transposed to bridge the gap between the vertebra and with gaps between the laminae also bridged by the bone. The spaces between two adjacent vertebrae are narrow and favorable to this operation. In performing the operation, a longitudinal incision is made directly over the spinous processes, through skin, supraspinous ligament and periosteum, to the tips of the spinous processes. The periosteum is split over both the upper and lower borders of the spinous processes and the laminae, and stripped back from them to the base of the transverse processes. The spinous processes are then transposed after partial fracture, so that they make contact with fresh bone, the base of each with its own base and the tips with the base of the next below. The adjacent edges of the laminae being absolutely free from periosteum, a small piece of bone is elevated from the edge of the laminae and placed across the space between them, its free end in contact with the bare bone of the laminae next below it. Chronic catgut is used for suturing the periosteum over the processes, and the skin wound closed by silk and a steel base applied. Rest in bed is absolute for from eight to ten weeks and walking is permitted after the twelfth week. The brace is continued for another month then gradually discontinued. He has operated upon forty-seven patients, eighteen of which have been without support from three to twelve months without symptoms of disease or increase of deformity. The article is illustrated.

THOSE DEAR GIRLS AGAIN.

Clara: "Rose told me that you told her that secret I told you not to tell her."

Belle: "She's a mean thing! I told her not to tell you."

Clara: "Well, I told her I wouldn't tell you she told me, so don't tell her I did."

—*December Lippincott's.*

TREATMENT OF EXOPHTHALMIC GOITRE.

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Out of the enormous number of monographs, which have been written on the subject of Treatment of Exophthalmic Goitre, the physician can derive little comfort and a mutiplicity of cures; the little comfort comes with the conclusion that a fair proportion of these cases get well symptomatically, for a longer or shorter period, under most any of the recommended treatments or under no treatment at all.

At the present time, the physician and surgeon go hand in hand in the care of Grave's Disease,—or perhaps I had better say, hand in glove. The more pessimistic a physician becomes as to his power in successfully combating certain manifestations, the more readily he passes them on to the surgeon, and in recent years, we find the surgeon more and more ready to take over the Goitre caases. Surgeons of the very first rank have, for some time, been operating upon them by the score and by the hundred, and issuing very optimistic statistical reports about them. And yet here and there is a sceptic.

Personally, I early was convinced that Goitre was a surgical disease, but failed in my endeavor to pass that conviction on to my patients. One cannot help but be more powerfully impressed by the end results, which come to him in his own individual work, than that reported by others of much wider experience and riper judgment; so that I am, at the present moment, ready to trim my sails a little and lean towards conservatism.

When I review in my mind the cases which have come to me in my personal work, I recall eighteen where the diagnosis was undoubted, with one death and seventeen apparent recoveries; but one of these was operated, and that one within the past two years. As these cases were strung out over a period of more than fifteen years, I am sure you will not expect me to claim that the medical treatment was the same in every case, or that the cures were the result of particular drugs, administered in any particular way, or in any specified dosage. As a matter of fact, a wide range of remedial agents were employed, according to my bias at the time, and I have faith in only a few of them having produced direct, concrete, immediate and observable results. For instance, I employed Salycilate of Sodium in one case, twelve years ago and twice during slight recurrences in the same case since then, with prompt and beneficial results.

I was interested in a conversation had recently with a surgeon of large attainment, relative to Goitre, the keynote of which was this: "In every case brought to me, I disregard the goitre and make a methodical, painstaking search for trouble that may have been lost sight of,

and it is remarkable how often something will be found. Frequently the female subjects will have marked deviation from normal in the generative system, and I have been gratified by relieving a large per cent of them by surgical treatment of these pathological conditions."

Until we understand more about the pathological conditions underlying Grave's Disease, it is impossible to formulate a rational, scientific treatment for it. If perverted function of the thyroid gland is at the bottom of the trouble, *if* it is I say, our first inquiry is directed to the nature of this perversion. It is assumed that the circulatory and nervous disturbances, accompanying the disease, are due to an undue increase in the secretion of the gland; or perhaps it might be a result of an alteration in the character of the secretion as well as an increase in the quantity; however, this is more or less conjectural, because we are unfamiliar with what the normal quantity is. In fact, our total knowledge concerning this secretion, is extremely limited and very inexact. Therefore, if the thyroid gland be the sinner, our working knowledge of its pathology must wait on more definite information as to its physiology.

It is quite conceivable that as more light is let in on these phases of the subject, the medical side will come into its own again, and be able to fire at the bull's eye with steadier nerve and more telling effect.

It is well however, as already noted, to remember that there is Counsel for the Defense and that it is maintained, now and then, that the thyroid gland is not the original and chief sinner. For instance, there is Tompson of New York, who has written often and at some length on this subject, and who believes that Grave's Disease is the result of auto-intoxication from the bowel. He claims remarkable results from treatment based upon this theory; the diet is limited to vegetables, cereals, fruits, fermented milk and one egg a day; in severe cases the restrictions are sometimes more severe and everything excluded but the fermented milk for varying periods of time. His medication consists chiefly of intestinal antiseptics—sodium phosphate and salycilate of soda. He reports great improvement in many cases under this regime, with exacerbations following the abandonment of the dietary restrictions.

In formulating a medical treatment, we can only enumerate a few methods of procedure and a few drugs whose efficacy is attested to by a fair concensus of reliable opinions.

(1) All are agreed that rest is a *sine qua non* in advanced or aggravated cases—both physical and mental; recumbancy with exclusion of visitors and of business and domestic affairs of a disturbing nature.

(2) Ice bag over the heart is often efficient in relieving the tumultuous action of that organ.

(3) Electricity. The galvanic current, with one pole over the thyroid gland and the other at the back of the neck, sometimes gets results if persevered in for a month or more at a time; and the X-Ray has had, in recent years, earnest advocates in selected cases. Surgeons frequently employ the rays, in advanced cases, for a time before operating.

(4) Serum Therapy. I have had no actual experience with this treatment, but it makes interesting reading in the literature, and cures are reported. Two methods of administration are used; in the one instance, feeding with the milk of dethyroidized goats is practiced, and in the other, the serum is used from animals that have been injected with human thyroid extract.

(5) Diet. With patients at rest, meat meals should be interdicted, and we can well follow out Tompson's ideas along this line, with nothing ventured and a good gain possible.

(6) Drugs. Sodium Salycilate I mention first, because I feel it has been a friend of mine, in doses up to a drachm a day. Sodium Phosphate in thirty grain doses, before meals. Aconite and Strophanthus are the only drugs which I have found meriting mention as influencing favorably the circulatory disturbances, and they are frequently disappointing.

(7) Wet packs and massage may be mentioned.

HIT THE NAIL ON THE HEAD.

"What," asked the Sunday school teacher, "is meant by bearing false witness against one's neighbor?"

"It's telling falsehoods about them," said one small maid.

"Partly right and partly wrong," said the teacher.

"I know," said another little girl, holding her hand high in the air. "It's when nobody did anything and somebody went and told about it."

—December Lippincott's

THYROIDECTOMY.

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To successfully remove a thyroid gland presupposes a practical knowledge of the anatomy of the neck.

I know of no other department of surgery where team work is more essential, and this comes from long service together.

The two assistants should know what to do and how to do it almost as well as the operator. The anaesthetist must be a person in whom the surgeon can place implicit confidence, for frequently his position is just as onerous as is the surgeon's.

And lastly the head nurse should be level headed, quick and methodical.

A word as to the armamentarium. The first and main thing is a plentiful supply of hemostatic forceps. As to the pattern each operator may choose as he wishes. For my own choice I use the heavy Ochsner. I also prefer a small knife, but whether large or small, the edge should be keen, as a dissection with a dull knife is always dangerous, especially in the neck. Small retractors, sharp and dull; plenty of number two Catput plain; two or three pairs of scissors, one a Mayo dissecting pair if the operator is inclined to dissect with the scissors; needle holder; needles, round, pointed, curved, etc.

Assuming our patient is a good surgical risk, the Goitre simple and confined to one lobe how shall be proceed?

Place the patient in the reversed Trendelenburg position facing a good light, with a skylight as well. Have a sandbag at hand to place under the shoulders to make the growth prominent. This should not be so large as to embarrass the breathing and should be ascertained before the day of operation.

I usually give a hypodermic of morph. sulph. gr. 1-4, atropine gr. 1-120, half an hour before patient is placed on operating table. Ether is the anaesthetic used, and by the open method.

The field of operation is protected by towels held in place by beetle-jawed forceps. Formerly, I had a hoop or bow placed over the patient's face, over which a sheet or large towel was placed and tucked around the chin to protect the wound from the patients' breath. However, it interferes so much with the second assistant that I am dispensing with it.

I make the collar incision of Kocher, through the skin and platysma. The flap is raised well up to the thyroid cartilage. This shows the deep fascia with the anterior jugulars coursing down over it.

This fascia is split in the middle line throughout the extent of the

wound, revealing the sterno hyoid muscles which are divided as is the next muscular layer, sterno thyroids.

We now come down on the peculiar dark reddish capsule of the gland.

A fore finger is carefully inserted under the muscles overlying the lobe you wish to remove and the lobe carefully enucleated, being careful not to get under the gland capsule, as a very troublesome bleeding would be started. Hook the finger round the outer border of the gland and dislodge or deliver it from its bed. Should more room be needed, place two clamps high up on the infrahyoid muscles and cut between them, and deliver the gland.

While the second assistant holds the gland forward and inward, the surgeon with scissors or knife splits the capsule along the posterior border and brushes it back. He and the first assistant now seize and cut each vessel as it appears, keeping all the while within the capsule.

It is better to free the upper pole of the gland first as it makes the securing of the inferior thyroid vessels easier.

In catching the vessels don't take up too much tissue in the bite of one hemostat, as the knot is apt to slip in ligating later.

The lobe is freed step by step until it is held only by the isthmus. This is clamped and cut.

If the work is done methodically every step of the operation can be seen and the three dangers of the operation avoided, viz., hemorrhage, the recurrent laryngeal and parathyroids.

Ligating the vessels comes next, and it is to my mind the biggest part of the operation. It should be done with scrupulous care. Many times I use a needle and whip stitch points hard to ligate.

The cut muscles should be readjusted and stitched together; the platysma sewed back with interrupted catgut, and lastly the skin sewed with horse hair.

I always drain either with a small soft rubber tube or gauze.

The dressing consists of a gauze pad covered with cotton and held in place by a roller bandage.

AFFINITIES.

The dapper little ribbon clerk gazed languishingly into the dark eyes of the handsome brunette waitress.

"Isn't it wonderful," he gurgled, "how opposites seem to be attracted to each other?"

"It sure is," agreed the beauty. "I noticed only today that the tallest man at the lunch counter ordered short-cake."

—*October Lippincott's.*

PYELOTOMY.*

L. SCHOOLER, M. D., DES MOINES, IOWA.

Pyelotomy and Nephrotomy are terms used to describe an operation where the capsule of the kidney, or both capsule and kidney substance, are incised for the purpose of exploration of the kidney and the pelvis of the organ, or for relief of the following conditions, notably: Suppurative Nephritis, Pyonephrosis, Hydronephrosis, Hemorrhage of the kidney, ascending Gonorrhea or Calculous Anuria, a condition which prompted the submitting of this paper.

Pyelotomy and Nephrolithotomy are practically the same operation except that in Pyelotomy the incision is made into the fibrous structure of the pelvis, instead of into the secreting substance of the kidney. And perhaps with only one distinctive indication, that of draining the pelvis in ascending Gonorrheal or other ascending infections.

In collections of pus or other collections of fluid, as well as calculi loose in the pelvis or blocking the upper extremity of the ureter, Pyelotomy is the operation of choice by reason of accessibility and freedom from hemorrhage, as well as being the farthest removed from the peritoneum, if the opening is made on the posterior surface, the incision, of course, always being made through the lumbar region.

If, for any reason, the kidney substance should have to be incised, it should always be in the longitudinal diameter of the organ, and slightly towards the posterior surface on account of the location of the principal arteries of the kidney. This point is sometimes spoken of as the bloodless region of the kidney. As many of the cases come to operation in poor condition on account of long duration of the disease and accompanying infection, hemorrhage becomes a very important factor, and a very small loss of blood may easily turn the scale in an undesirable direction. Therefore, Pyelotomy is the less dangerous primarily and secondarily. Infection is less likely to occur than where the kidney substance is interfered with.

The remaining objection that is frequently raised to Pyelotomy is, that it is liable to be followed by a urinary fistula. So is any other operation in this locality, under certain conditions which I need not mention as they will all suggest themselves to your minds.

The most frequent one, in my estimation, is improper methods of drainage. This includes a wrongly placed tube, or one that is too long retained, or both. In Pyelotomy, where the ureter is open, I

*Read before the Polk County Medical Society, November 26, 1912.

cannot conceive of any condition where the tube should be passed further than just short of the incision into the pelvis, and in many cases no drainage whatever is necessary, as for instance, in cases where there was found one or more calculi in the pelvis of the kidney without any infection. I am unable to see the necessity for drainage any more than in any other clean wound.

If the urine is sterile, the incision may be closed as in the bladder, or the adjacent structures may be neatly closed down to the fibrous tissue of the pelvis and no harm will result. Some of our best and most experienced surgeons are now omitting drainage in tubercular cases of this organ, with the result that patients make as good and much quicker recoveries without fistulae. In all operations on the kidney, the patient should be gotten out of bed as early as possible in order that drainage if any is necessary, will occur through the ureter, as well as the effect that the upright position has on the circulation, especially in elderly persons.

In this as in any other operation on the kidney, the incision should be made large enough for a complete examination of the kidney in its bed. With many operators, there is too much dragging on the organ, with danger of tearing the peritoneum or blood vessels, and unnecessary bruising of the kidney substance.

To those of you who have never tried it, the resection of the twelfth rib will be an agreeable surprise in lessening the difficulties of the operation, on account of the increased space. The operation of resection is not difficult and adds nothing to the severity of the procedure. It not only shortens the time of the operation, which is always gratifying to the operator, but it lessens the time of the anaesthetic, which may have a greater influence in these cases than we sometimes suspect. At any rate, in all major operations we meet with complete suppression in more cases than is comfortable; generally believed to be due to the action of the anaesthetic. If this theory is correct where the kidneys are apparently normal, why should it not be more apparent where the evidences of a diseased condition of the kidney is positive.

I have had no experience with lumbar anaesthesia in these cases, but I am inclined to favor the method as one not so likely to impose an additional burden on so important an organ.

This paper may be appropriately closed by the history of the following case:

J. W., American, white, aged 73. Had been troubled with kidney stones for over forty-nine years, (the time is exact, not guessed at). While in Union Army, during War of the Rebellion, he was wounded in the shoulder and while in the hospital recovering from his injury,

he had his first attack of Renal Colic and has suffered, more or less, every year since that time with similar attacks. At one time he passed per vias naturales, thirty-two small calculi within a period of two hours, and at other times a smaller number, but has never felt that he was permanently relieved. During the first week of September, 1912, he began having chills with a large quantity of pus in the urine, also emaciation with pain and tenderness in region of left kidney. Upon examination, there was discovered a large mass on the left side which was believed to be the left kidney by Drs. Maple, Willet and myself. In fact, the case was regarded as a clear one of Calculi with Suppuration. Operation was advised. The patient, however, while not strongly opposed to operative measures, decided to try urinary antiseptics for a time, and that course was pursued for the next two weeks, with the result that the urine cleared up very markedly, but the tumor with pain and tenderness still remained. At the end of that time, he entered the hospital for operation.

The usual incision in the lumbar region was made with resection of the twelfth rib (which had previously been determined upon), exposing very fully the large pus sac, with a very thin layer of kidney tissue covering the large single calculus with projections into the calices.

The kidney pelvis was a large pus sac with very thin and friable walls, so much so that while making a very careful examination of the conditions present, my finger accidentally passed through the anterior wall of the pelvis instead of making the opening through the posterior wall as intended, but as I had carefully avoided the peritoneum, no damage was incurred.

The amount of pus was estimated at a pint or more, a considerable portion of which was clotty, indicating that it was mostly of old formation. There was a single stone, four inches long, regularly formed, on the posterior surface but with projections forward. It was closely and firmly adherent to all the kidney substance with which it was in contact; this included all but a small portion of the under surface, or that portion directed toward the upper end of the ureter. On account of the large dilated pelvis, I was enabled to separate the stone from the very thin layer of very pale kidney substance; the pale condition being due to the compression on account of the pus.

The stone is black, rough, and irregular and weighs a trifle over two ounces avoirdupois. The wound was lightly packed with sterile gauze for the first twenty-four hours, at the end of which time a rubber tube was substituted. The drainage was at no time profuse and consisted of pus and urine. The urine could, of course, not be of large quantity for the reason that the remaining kidney tissue did not amount to more than one-tenth of its normal size, and the urine continued to escape for only four or five days. I am not sure, in view of the after progress of the case, that I might not have dispensed with the drainage entirely after the first twenty-four hours. The patient made a good recovery.

If the administration of thyroid extract to a patient suspected of exophthalmic goitre increases the symptoms the diagnosis is more probable.

American Journal of Surgery.

INDICATIONS FOR PROSTATECTOMY.*

C. S. JAMES, M. D., CENTERVILLE, IOWA.

We are co-workers today in an era that constitutes an evolutionary epoch in the relation of the physician to his patient.

A period that is characterized by an enormous increase in the requirements and responsibilities of the *family physician* to a greater degree, probably, than any other branch of the profession; for not only is it his duty that the correct diagnosis shall be determined, but that it shall be an early one, for upon this factor rests, in the highest degree, the success of effective measures instituted for the correction of the pathology present.

That this is true, permit me to cite you to the present day phases as compared to but a few years ago—of, for instance: Tuberculosis, Pneumonia, Diphtheria, Gastric lesions, Gall Stones, Appendicitis, Cancer, Ocular, Sinus or Bone lesions, etcetera. No longer is it possible to evade or shirk dire responsibility to our patient in the presence of unfortunate results due to delay on our part by the oft-heard self-excusatory statement: "I don't know anything about the eye, ear, nose or throat," or "I am not a specialist," or "Don't believe in or practice surgery."

It matters little what we may believe in, individually, but it is our duty as a profession to afford our patient the benefits derived from whatever measure experience has proven beneficial or curative, and the public has the right to and does expect thoroughness, exactness and promptness on the part of their medical consultant.

It is my privilege today to discuss one of the problems of the "Old Man," namely—prostatic hypertrophy, with its many distressing and oftimes fatal sequelae.

At about the age 54, the prostate begins to enlarge, due to a glandular hyperplasia, and 64 usually marks the beginning period of complications.

Experience has shown that prostate hypertrophy occurs twice as frequently in men living in the country as those living in the city, with but a small percentage of them giving a history of specific infection. The symptoms of prostatic obstruction may be tabulated briefly, as follows:

1. Primary symptoms of obstruction at the neck of the bladder—i. e., frequency of urination, burning, pain and tenesmus.
2. Secondary symptoms—i. e., loss of appetite, insomnia, loss of strength and weight (due either to damming back in the ureters and kidney pressure, or caused by intoxication from the presence of residual urine).

*Read before the Southeastern Medical Society, November 21, 1912.

3. There may be from 3 to 15 ounces of residual urine, and the patient not using a catheter.
4. Extreme over-distension and dribbling.
5. Retention from time to time.
6. Ability to void some urine, although the patient has to use a catheter to secure rest and comfort.
7. Entire dependence on the catheter.
8. Complete retention.

Prostatic hypertrophy, with mild symptoms, may exist for years without appreciable change and yet the complicating factors gradually and latently develop and require but some slight incident to precipitate the storm, with its serious and often fatal outcome.

Prostatectomy should be instituted when the symptoms present are definitely ascertained to arise from obstruction, due to either pressure upon or distortion of the urinary outlet, by either the hypertrophic or cirrhotic prostate gland.

Urinary symptoms may be attributed to the prostate gland when in fact due to other causes, for instance the patient complains of occasional retention, hemorrhage, pain, etc., and a rectal examination reveals a mass per rectum and straightway prostate hypertrophy is said to exist and to be the cause of the trouble; and upon operation, a stone is found to be the offending member—a condition which could have been effectively met by perhaps a simpler procedure, or, still worse the consequences when later the bladder symptoms prove to be due to an atony, the result of an early locomotor ataxia.

It is true that many of these patients may preserve a certain degree of comfort and a fancied degree of safety by the use of a sterile catheter, aseptically used, but this is very difficult even for the physician to maintain, and when attempted by the patient is usually a farce. I know it is easy to give the simple essential directions, but how long and effectively are they followed?

That timely operation means early operation is as true here as it is in other surgical pathology.

Prostatectomy, no doubt, offers a better prognostic outlook when the prostate has simply, by its size, encroached upon the bladder space and obstructed the outflow and increased the residual urine. This avoids the many complicating factors and sequelae, as cystitis, retention, kidney impairment, sepsis or possibly malignancy.

A careful history will in most cases enable a probable diagnosis of prostatic hypertrophy. This should be confirmed by a rectal examination and the determination of the amount of residual urine is of the greatest importance; this, and the relation of the prostate to the urethra, can be determined by the aseptic use of a soft catheter. It is rarely necessary to use a sound, and never a cystoscope, until just prior to operation.

The worst thing which can be done for patients before an operation is to give them a cystitis, and one of the surest ways of causing this is to repeatedly introduce an instrument into the bladder.

The treatment of prostatic hypertrophy may be summed up as follows:

1. Bottini cautery operation (obsolete and but mentioned to be dismissed).

2. Catheterization—an undesirable procedure that we will not discuss owing to the improvements in operative procedure having so narrowed its field of usefulness.

3. Prostatectomy—both perineal and suprapubic routes have given satisfactory results. The route should be determined only after a careful analysis of the symptoms and clinical condition of the individual case.

These cases, when they come for operative relief, are seldom good operative risks by reason of senile changes, arterio-sclerosis, obstructive complications, as well as nephritic and cardiac degenerative lesions.

Hence, it is necessary in these cases that a preliminary preparatory treatment be instituted lasting from a few days to possibly two or more weeks, in order that the complications present may be eliminated or improved.

It is advisable to relieve the residual urine by catheterization at lessening intervals for several days prior to operation for in this manner we not only improve the local bladder condition, but still more important, gradually relieve the back pressure upon the kidneys, after which the operation does not suddenly remove the intra nephritic pressure and thereby cause an acute congestion of the kidneys, with possibly resulting death. This applies to two classes of cases in particular, namely—where a large amount of residual urine is present, and in cases where the catheter has not been used prior. Diet is not to be disturbed in any way until up to the operation day and the patient should be encouraged in the free use of water, for the arteries of these patients are hard and inelastic, and it is necessary to fill up the circulation and thus throw the kidney function into an increased activity. Urotropin is indicated for a few days prior to operation to improve the cystic contents and possibly lessen infection.

The time for operation is not only determined by the general condition of the patient but also by a comparative study of the 24 hour specimen secured daily, and it will be noted that on the beginning of the preparatory treatment, the total urinary quantity will increase, but the Sp. Grav. will decrease for a few days, and operation must be deferred until not only the quantity but the Sp Grav. are both increased. The presence of albumen casts, and even blood are of but little significance in determining the operative time. The operation should never be

done during the stage of acute retention but the preparatory treatment may be as well instituted at this time as later.

It is advisable to make a cystoscopic examination immediately prior to the operation for it is a valuable aid in determining the exact type of operation best indicated in the individual case. The cystoscope also clears up many points in the differential diagnosis, makes it possible to differentiate between diverticulitis, neoplasms, stones, and, at times the ureteral orifices can be seen and the presence or absence of pus coming from one or both kidneys be determined. It reveals the condition of the mucous membrane of the bladder and the presence or absence of a median lobe may be established.

Cabot (Journal A. M. A., Vol. XLIX) states in substance:

"If the use of the soft rubber catheter at periods with increasing frequency is not feasible, it is sometimes necessary to drain the bladder either by a superpubic stab drain or incision. This is of particular advantage in patients with severe cystitis or damaged kidneys, in patients suffering with severe hemorrhages or diabetes. Its advantages are the quick relief afforded with slight shock with severe symptoms. We give the patient all the advantages of a prostatectomy with none of the serious dangers. He gets good bladder drainage and consequent rest and comfort. If the preliminary cystotomy kills, a prostatectomy would have been foolhardy. If the patient recovers from the little blow, he usually rapidly gains strength, the prostate becomes less congested, the cystitis disappears, other complications lessen and we have produced a change which usually permits a successful enucleation later."

GOVERNOR'S GOVERNOR.

When the late Senator Taylor, of Tennessee, was governor of that state he was interrupted just as he sat down to luncheon at home one day by a message from the capitol to the effect that two men from an outside town wanted to see the governor at once.

The governor said to Sam, his negro butler, who brought in the message: "Sam, tell them I'll be right down."

"Yes, sir," said Sam.

"Sam," broke in Mrs. Taylor, "you tell them the governor will be down in half an hour—after he has finished his luncheon."

"Sam," said the governor, "say I'll be right down."

"In half an hour, Sam," said Mrs. Taylor.

"Sam," said the governor, "do you know who is the governor of Tennessee?"

"Yes, sir," replied Sam; "I'll tell 'em you'll be down in half an hour."—Saturday Evening Post.

INFANT MORTALITY.

In his President's address at the meeting of the American Medical Association, Dr. Abraham Jacobi, New York (Journal A. M. A., June 8), took up the subject of the best means of combating infant mortality, after first noting the growth of the Association and the desirability of further increasing its membership. According to the New York Milk Committee and other authorities, 17 per cent. of infant deaths are caused by congenital troubles. Two great remedies are recommended: 1. No midwife be allowed to handle any of these cases. 2. Rest be provided for the mothers after confinement and the children be referred to milk stations. Both of these are combated by Dr. Jacobi, who says that his program includes additions and changes to these propositions. If 17 per cent of infant deaths are caused by congenital troubles, study these and obviate them. The babe's life and pathology begins nine months before the birth. What the world wants is healthy babies, and it seems almost impossible to prevent some from being infirm, both physically and mentally, so long as the riches provided by this world are accessible to only a part, and the advice to limit the number of children would be more appropriately given to the poor rather than to the rich. A laboring mother is handicapped in producing healthy children, and the least that can be done for her is the reduction of working hours during pregnancy and protracted rest after confinement. Insanitary occupations are also hurtful. As regards the widwife, he says that 50 per cent of all the births in the United States are attended by non-medical women, and he strongly criticizes the view that the midwife should be abolished. The midwives, he says, are mentioned as not even worthy of being educated, and he asks, "Do our obstetricians demand all the obstetric practice? He would give a hearty welcome to the evening-dress obstetrician, who gets hundreds of dollars for a confinement, in the household where the income is $15 or $10 a week. The teaching of midwives is not so difficult as is thought, and doctors themselves are often defective in practical knowledge. If this is the case in the green tree, i. e., among the men and women with medical diplomas, what can be expected from the untutored? It is useless to attempt a comparison of a midwife with a medical man. They must be considered individually. The ignorant doctor in obstetric work is inferior to the well-informed midwife, and vice versa. What he would teach the midwives is, besides the manual care of normal labor, not to use medicine, not to operate, not to, try even to remedy wrong fetal position as a rule; to teach them the use of soap and water and antiseptics; enforce by law and custom the frequent change of their own clothing; forbid the simultaneous attendance on two or more cases; see that she does not attend a labor case if there is in her family or immediate neighborhood a case of contagious disease; and she should be examined and licensed and protected as are the doctors. The midwife should know when to call a doctor and how to do a version in cases of emergency; how to attend the eyes and meet other contingencies, like hemorrhage, asphyxia, etc.; and, more than all, how to keep absolutely clean, and lastly, and here is the secret of success, not to leave the woman. As regards the milk question, Jacobi insists that the maternal milk is the safest nutriment. It is not much influenced by emotions, cares and worries, only occasionally by medicine taken by the mother or by her food. The daily quantity is rarely less than a quart, and there is no such thing as abso-

lute absence or secretion. He does not think that female suffrage will alter the conditions, or that women will be unable to meet added responsibilities in our modern civilization. The mother's milk has certain protective properties not possessed by substitutes and contains substances which organic chemistry has never isolated—the ferments that circulate in the blood, the alexins, agglutinins, etc. He refers to the reduction of infant mortality in Paris during the siege (1870-'71) when women were compelled to nurse their own babies on account of the absence of cow's milk, as showing the superiority of maternal nursing, and gives a table to show the incidence of disease in the breast fed and artificially fed.

SUPRAPUBIC CYSTOTOMY.

W. E. Lower, Cleveland (Journal A. M. A., November 30), advocates suprapubic cystotomy as a preferable operation for most cases of vesical calculus. He claims that it has been so much improved since the days of Bigelow that litholapaxy is not the safest or most satisfactory procedure except in selected cases at the present time. The danger of peritonitis should be a negligible one with modern accepted methods and better anesthetic methods have reduced the danger of shock. The mishaps that do occur with litholapaxy are almost always serious, and he is now treating a case of urethral laceration from this cause. Many stones are too large and too hard to be removed by crushing and imbedded ones cannot always be attacked. The operative treatment of adherent or encysted calculi is always the high incision, and inspection is absolutely necessary, as it is also for multiple stones. It is generally accepted that the suprapubic operation is the operation for the young, and there are few surgeons nowadays who would employ any other in cases of prostatic hypertrophy. The presence of a foreign body as a nucleus is another hindrance to crushing operations. In the ten years from 1900 to 1910 there were in the Lakeside Hospital, Cleveland, forty-six operations for vesical calculus, thirty-eight suprapubic and seven litholapaxies. Four deaths occurred in the thirty-eight, all complicated cases. One death occurred in the seven crushing operations from severe laceration of the bladder. The objection to suprapubic cystotomy—that it has a prolonged convalescence—was valid when drainage was deemed necessary, which is no longer the case. If the bladder is properly closed a week or ten days will suffice for a complete cure. Two or three points in the technic are mentioned, as follows: The cut edges of the bladder must not be grasped with crushing forceps. The edges must be carefully approximated while the wound is on the stretch so that the stitches will not be separated when the bladder is distended with urine. The ligature must be absorbable. The author's personal experience includes fifty-three suprapubic operations on forty-nine cases with no mortality.

DEFINED.

"Pa, what does it mean when it says a man has arrived at years of discretion?" "It means, Johnnie, that he's too young to die and too old to have any fun."—Judge.

FURTHER OBSERVATIONS ON PRURITUS ANI: ITS PROBABLE ETIOLOGIC FACTOR BASED ON ORIGINAL RESEARCH.

BY DWIGHT H. MURRAY, M. D., OF SYRACUSE, N. Y.

This paper was a continuation of the work that he has been engaged in for the past two years and which he presented to the American Proctologic Society, at the Los Angeles meeting, in 1911.

From his experiences, since discovering that a skin infection, is the important factor in pruritus ani, he believes that we are now in a position to state that there may be two varieties of pruritus ani; one that may be coincident with some of the diseases of the rectum and in which the skin infection is not present. He designates this form as Pruritus Ani Simplex; the variety, which is chronic, in its character, and, in which the skin infection is present, he designates as Coccigenous Pruritus Ani.

He states that he is continually seeing patients who have all varieties of rectal diseases, including chronic diarrhea and proctitis, in many of which, there is a leakage of moisture upon the anal skin; in very few of these cases does he find pruritus ani, and he believes that when it is present it is coincident rather than having been caused by these discharges occurring in various rectal diseases.

He gives a resume of an examination of 900 consecutive cases, in which he finds 490 cases of constipation, 369 of hemorrhoids, and 94 of pruritus ani. Of the 94 cases, which gave a history of pruritus ani, he finds 5.5 per cent. of the 900 cases examined who had pruritus ani were constipated; 2.3 per cent. had hemorrhoids; 1.2 per cent. had some form of anal growth; 2.2 per cent. had ulceration; 2.5 per cent. had diseased crypts; 1.3 per cent. had hypertrophied papillæ; .03 per cent. had polypi; .03 per cent. had fistulæ. He believes that the relatively small percentage of each of these conditions that were present in the pruritus ani cases, show that they were coincidental when present and could not be classed as causes of pruritus ani.

Thirty-two of these 94 pruritus cases, have been examined bacteriologically by him and all of them showed streptococcic skin infection as the predominating condition.

He believes that the excess moisture and the infiltrated condition of the skin in these cases, is due to the low grade inflammation caused by skin infection and is not the result of moisture coming from the inside of the anal canal.

He presented photographs of petri-plates, of a typical case, showing the immense numbers of streptococci at the time of the first examination; another photograph of the same case, showing that streptococci were not present in the culture taken from the anal canal, and another photograph of a petri-plate, of the same case, after four months of treatment (one month after itching had ceased), in which last photograph, no streptococci were present.

He gives a report of his technic in greater detail than in last year's paper, because he has found that the last year's report was not understood by some physicians who had employed his method.

From some reports received he believes that stock vaccines will not give good results because they are made of a different branch of the streptococci family than the one causing pruritus ani.

He gives detailed reports of the case treated, both of the first and

second series, showing very marked improvement in all of the cases and cures, so far as present conditions are concerned, of others.

He presented a series of twelve control cases, having a variety of rectal diseases, that are usually given in text-books as causes of pruritus ani, none of which had the disease nor did they show a skin infection.

He said that the conclusions of the first year's work still hold true, and he gave the conclusions of his second year's work as follows:

First—It is shown by the nine hundred consecutive cases of rectal diseases, that constipation and hemorrhoids, or any lesion, are coincidental or may be predisposing, but not the exciting cause of pruritus ani.

Second—Even when there is a discharge of pus or other moisture on the skin about the anus it is not the actual cause of pruritus ani, unless there is a streptococcic or other infection of the skin. They may exist together but are then only a coincidence.

Third—All investigators, in making cultures, should use in addition to the hard media, the liquid media and Gordon's series of carbohydrates, if they wish to differentiate the streptococci and other bacteria.

Fourth—Avoid excessive reaction.

Fifth—Use small initial doses.

Sixth—Give subsequent injections only after the previous reaction has completely subsided.

Seventh—He suggests the following change in the nomenclature of pruritus ani, by recognizing two varieties: Pruritus Ani Simplex, and Pruritus Ani Coccigenous.

INCONGRUOUS SYMPTOMS IN HYSTERIA.

B. R. Tucker, Richmond, Virginia, (Journal A. M. A., November 23), calls attention to the difficulties met with in the diagnosis of some cases of hysteria. He quotes from neurologic literature showing the different statements that are made in regard to various characteristic symptoms. "Mills thinks that true astereognosis, loss of the sense of position, true ataxia and hemianopia are not found in hysteria. Purves Stewart states that in hysteria absent knee-jerks, incontinence of bladder and rectum and the Babinski phenomenon never occur. Babinski himself says that hysteria itself is incapable of modifying tendon-reflexes. Dana says that the sphincters are never involved except temporarily or through some complication. Incontinence of feces never occurs, according to Grainger and Stewart. Philip Coombs Knapp gives an excellent biography of the reflexes in hysteria and says that the Babinski and Oppenheim reflexes are never caused by hysteria. Tendon reflexes may be exaggerated within normal limits. Whether hysteria can give rise to ankle-clonus or loss of knee-jerks is doubtful. Knapp also says that total paralysis and total anesthesia on one side are very rare. He says that Crocq believed he had found ankle-clonus and patella-clonus in hysteria, and was supported by Charcot, Sachs, Oppenheim and others; and loss of knee-jerks has been found by Steiner, Marye, Nonne, Wigand and Charcot. Complete absence of plantar reflexes has been noted by Knapp and other observers. Mills states that Van Gehuchtan has reported one case with the Babinski phenomenon and ankle-clonus which disappeared in a few

days." The whole outcome of the case, Tucker says, may thus hinge on the view we take of certain symptoms. Hysteria is a less frequent diagnosis, however, than was formerly the case, which is fortunate. Tucker reports four cases, one with pseudo-aphasia, another with loss of sphincter control, another with unilateral amblyopia and still another with absent knee-jerks, all of which examination and subsequent history proved to be clearly hysterical. He has other less striking cases that he might report, but these are sufficient to illustrate the points he makes.

COLDS IN CHILDREN.

T. S. Southworth, New York (Journal A. M. A., November 30), says that recent years' experience has taught him to respect the common infectious cold as far from a trivial affection. Its bacteriology is yet uncertain and we may have several organisms to contend with. Infants appear to be especially susceptible to these infections and when it invades a household it is likely to go through several members. In institutions where they care for children it spreads with great rapidity, and as sequels ear disease is common, pneumonia rather less so but not infrequent. The most frequent injury, however, is inflicted by their influence on nutrition, especially in bottle-fed infants. We are apt to look on these as colds when they are in reality systemic infections. Such colds are an unfortunate handicap in conducting feeding cases in private practice and digestive disturbances caused by them are common. The loss of weight leads the nurse or mother to overfeed the infant. Household infections are shown by recurring attacks during the colder months, and they may occur also in the warmer seasons. The amount of injury done to young children can scarcely be estimated, especially in oral and sinus complications. Traveling on trains, children's parties, dancing schools, etc., are frequent methods of exposure, and Southworth emphasizes the importance of this risk. In treating a case isolation is often difficult unless the child is confined to bed and this aid is lost during convalescence. He does not consider it, however, impracticable, and if parents could realize the greater danger from this cause they would enforce it, as they do in cases of the regularly recognized contagious diseases like diphtheria, scarlatina and even mumps and chicken-pox. It is a comparatively simple matter for the physician to acquaint the mother with the risks incurred and to advise her to keep those having the slightest cold from contact with the children. But Southworth knows of no text-book that teaches the danger of the common infectious cold and no medical school or health board which has taught or enforced precautions against this contagious disorder.

GASTRIC ULCER.

J. W. Weinstein, New York (Journal A. M. A., September 28), reports his method of treatment and experience with chronic gastric ulcer. He includes under this head all cases with symptoms of pain in the stomach, heartburn, belching and sour eructations coming on from one to five hours after meals. Every case treated was of long standing and had been treated by many physicians. His success has been most pronounced in simple uncomplicated cases, but he has had success in the other type, in which considerable stasis of food was a factor. "In devising a plan of treatment for ulcer of the stomach several objects are to be kept in view. We must give an appropriate diet. We must give something to cure the ulcer. We must check the flow of hydrochloric acid which interferes with the healing of the ulcer. We must combat the stasis of food, if there is any, in case the ulcer is situated in the pyloric or duodenal region with a resulting narrowing of the outlet. We must combat a continuous flow of acid from the stomach, if there is any. The ideal diet in ulcer of the stomach must have the following characteristics. It should be bland and non-irritating to the ulcer and the mucous membrane of the stomach. It should cause the least secretion of hydrochloric acid. It should leave the stomach in the shortest possible time. With these qualifications it should combine the highest possible caloric value," these objects are accomplished by the directions, a copy of which must be handed to the patient. For the first four weeks meats and broths are excluded from the dietary; then easily digested soups and meats are added. To cure the ulcer he gives one dram of subcarbonate of bismuth an hour before meals in the morning, thoroughly stirred up in a tumbler of buttermilk, and, to prevent its cumulative tendencies within the intestines, he gives one and one-half tablespoonfuls of castor oil once a week to clear it out. To check the flow of hydrochloric acid he uses atropin and an alkali in the form of magnesium oxid or bicarbonate of soda, in doses of 5 grains to 1 gram. For some patients who do not do well on this plan he substitutes one or two tablespoonfuls of olive oil, ten or fifteen minutes before meals, for the belladonna and alkali. Food stasis if there be any, is met by lavage of the stomach seven hours after the meal. If there is little food present, once a week will do. If there is much, twice a week. He also massages the stomach and pyloric region if there is no contraindication, such as great local tenderness. The motility of the stomach must be determined in every case of ulcer before starting treatment. This is done by giving a regular meal and washing out the stomach seven hours later, the patient not taking food or drink in the interim. If food is present the motility is impaired. The continuous flow is treated by lavage once or twice a week, adding bicarbonate of soda to the water. While washing ulcerated stomachs requires some caution and skill, he has never met with any mishaps. If there is evidence of pyloric or duodenal obstruction the case is not suitable for medical treatment. The last step in the treatment is the application of wet compresses to the stomach every night. The patient sleeps through the night with it and removes it in the morning.

RECENT DEVELOPMENTS IN PATHOLOGY.

D. J. GLOMSET, M. D., DES MOINES, IOWA.

During recent years the greater part of investigative work in pathology has centered about bio-chemistry and chemo-therapy. This is a natural sequence in the evolution of medicine, for it matters little from what particular germ layer the malignant cell arises, the real point at issue is the nature of the malignancy. Similarly the suffering patient cares little about the definite structure of a gumma or a tubercle—he is interested in an agent which will penetrate the lesion and destroy the organisms. Thus it comes about, that the recent advances in pathology have all been along the line of chemistry, for when the morbid anatomy of the cells ceases to shed light on perplexing problems, man inevitably turns to a study of the biophore and its side chains.

One phenomenon which has been assuming increased importance of late is that of anaphylaxis, or allergy. Various observers noted what they considered curious unexplainable manifestations, and these were known by the name of the observer; thus we have, Arthur's phenomenon and Theobald Smith's phenomenon. These we know today as anaphylaxis. From this obscure position allergy has leaped into the foreground, and has assumed such importance that scarcely a number of a journal, here or abroad, fails to make some reference to it, and the International Congress of Hygiene, which has just completed its sessions, thought the condition important enough to give it special consideration. And today anaphylaxis is used to explain a great variety of heretofore incomprehensible manifestations of disease.

In a word, the condition of anaphylaxis appears to be dependent on three factors; viz., the introduction into the circulation of a sensitizing dose (maybe as minute as 1/20 of a million grams) of a proteid or of a substance very closely allied to proteids. Secondly, the lapse of a certain period of time, commonly from five to ten days, followed by a second injection of the identical proteid used in sensitization, and this gives rise to a sudden disturbance often of a very severe nature..

Now, the mechanism involved seems to be this: The initial dose stimulates the body cells so that specific receptors are formed and thrown into the blood stream in large numbers. These are true antibodies, and are of the nature of enzymes having the property of splitting up the proteids into toxic compounds. The sensitizing period is the time required by the cells for the manufacture of these antibodies. Then when a second and much larger dose, usually 2 to 5 cc., of the same proteid is introduced, the receptors sieze upon and rapidly split the proteid, thus setting loose a large amount of toxic substances into

the blood stream in a very short time, and these give rise to the symptoms.

Anaphylaxis is now being used to explain serum sickness, tuberculin reaction, the mallein test and the so-called idiosyncrasies due to shell fish. Another, at once curious and important, use to which the allergic phenomenon has been placed by Abderhalden and others, is for the detection of specific proteids in the blood stream, and by this use it has now been determined that amido-acids do occur in the blood and that the proteids are often "organs specific." Finally the anaphylaxis is thought to explain the symptom complex of infectious diseases. Thus for instance, in typhoid fever, the sensitizing dose of the proteid is furnished by the first bacilli which gain foothold. The sensitizing period corresponds with the incubation period, after which symptoms follow, due to the fact that by this time enough proteids and receptors to break them up, have been formed in the body.

Interesting work has also been done in chemo-therapy. This work originated with Professor Erlich, and was first applied with success to diseases of parasitic origin. Sometime ago, however, Wassermann obtained very encouraging reductions in mouse cancers by the use of chemical substances (compounds of seleurium and tellurium with anilin dyes). This work was followed by that of Neuberg and Casperi, and very recently an article by Gaylord of Buffalo, appeared in the Berlin Klinische Wochenschrift, giving the summary of the work done in the Cancer Research Laboratory in the State of New York. Gaylord has obtained very striking results treating carcinoma of the thyroid in fish with various chemical substances in great dilutions, notably mercuric chlorid and arsenic pentoxid. The treatment has given uniformly good results in great numbers of fish.

In the last number of the American Journal for Infectious Diseases, work done in the Prague Institute by Wells and Corper marks a distinct advance in the therapy of tuberculosis, since they have been able to discover certain chemical substances which readily penetrate the tubercle, and others which do not.

The old Vermont farmer was on his deathbed. He had not been especially pious, and the minister had called in to urge him to repent at the eleventh hour.

"Remember, neighbor," said he, "that you must have spiritual food as well as bodily food. 'Man cannot live by bread alone.'"

"No," said the farmer, "he must have some vegetables." And immediately thereafter he turned his face to the wall and died.

The Department of Practical Preventive Medicine.

E. A. KEPFORD, M. D., DES MOINES, IOWA.

The growth in the field of preventive medicine is exceedingly rapid. This is evidenced by the large number of conventions and conferences that include in their programs social aspects of preventive medicine. That prevention is better than cure is an axiom among up-to-date practicing physicians. Not that the medical doctor will not always be a public necessity but to remove the conditions which produce sickness and death is regarded of the greatest importance.

The recent conference of Charities and Correction at Cedar Rapids with a program extending over three days, had no section that did not embody somewhere in its discussion some phase of prevention. Indeed, a number of physicians were on the program and many of the questions pertaining to social disorders were referred to the physician and sanitarian. This may be regarded as significant. In the conference on defectives and the insane were to be found such men as Dr. Max E. Witte, Dr. George Mogridge, Dr. Clarence Van Epps and Dr. George Donohoe, while in the section dealing with the public health and the public schools were Dr. J. V. Littig, Dr. E. A. Rogers and Dr. Henry Albert.

A section on public health and scientific study of social problems was presided over by Dr. Henry Albert, and Dr. C. S. Chase participated with an illustrated lecture on social and health conditions.

The section on defectives in the public schools was addressed by Dr. L. T. Sidwell.

At the International Congress on Hygiene and Demography, Dr. Ira S. Wile of New York City advocated a plan for teaching school hygiene. He maintains that the purpose of education is to protect the state from all dangers arising from ignorance, disease, moral degeneracy, industrial retrogression, criminality and civic unrighteousness. He maintains that the state is a form of social organization and is but a single type of social unit, that relation of the state to the city on one hand and to the nation on the other, has varied responsibilities. In the last analysis the strength of the nation is limited by the strength of the weakest individuals of which it is composed.

Social hygiene includes personal hygiene, family, municipal, state and industrial hygiene. He says that the proper place to teach the basis of social hygiene is in the elementary schools because 94½ per cent of school children fail to get above the elementary grades. He submits a plan that school hygiene shall be based upon a correlation of existing courses in nature study, physiology, hygiene, domestic science,

civics, etc., without the introduction of new studies and without any additional cost to the educational authorities.

He maintains that in the present teaching of physiology and hygiene the cart is placed before the horse, that the average child will readily grasp and appreciate the facts essential to the correct mode of living while it lacks interest necessary to stimulate attention to the weird assortment of anatomical and physiological statements. It would seem that Dr. Wile's position could be generally agreed to as it is conceded that the present teaching of school hygiene is of little practical value.

Scott and Woodbury counties voted to establish public hospitals under the Munger law at the election in November. Scott county proposes to expend $50,000.00 for the erection of a hospital, practically for tuberculosis and other contagious diseases. Woodbury county will expend $100,000.00 for its hospital. This makes four counties in Iowa which now have or will have public hospitals.

TO PREVENT TUBERCULOSIS.

Necessity for Stopping the Disease at Its Source Presented to International Congress at Rome.—Nathan Straus, New York.

Milk a Considerable Factor.

Pointing out that America had spent $14,500,000 the past year in combatting tuberculosis and was maintaining 1,526 associations and institutions whose work was chiefly to alleviate, not to prevent, the dreaded disease, Mr. Straus cited the investigations by the United States government that demonstrated that "the milk from tuberculous cows is a real and considerable factor in the persistent increase of tuberculosis among human beings."

He said these demonstrations had been corroborated by the British Royal Commission on Tuberculosis, that Dr. Park, of New York, had estimated that ten per cent of all children dying in infancy from tuberculosis were victims of milk infection. After showing the wide extent of bovine tuberculosis, Mr. Straus cited the Public Health Service, the American Medical Association and Rockefeller Institute of Medical Research as urging the necessity for pasteurizing milk so as to prevent its being a vehicle for the transmission of the plague. He added:

"There is little that America can add to the knowledge of methods of preventing the infection of the well by tuberculous human beings, but there is much that America can say to the nations out of its experience and official investigations as to the importance of considering the other great cause of tuberculosis—the use of milk and other raw dairy products from tuberculosis cattle. And this is the message that I bring from my government:

"Pasteurize and thereby prevent tuberculosis."

The Only Guarantee of Safety.

Officially the American government and the American medical profession contents itself with recommending the pasteurization of milk not from tuberculin-tested cattle. Personally I go farther.

Several years ago the milk produced under the certification of the New York County Medical Society by one of the most famous dairy farms in the state showed an increase in bacteria, tuberculosis was found in the herd; and it developed that from the unknown date of the invasion of tuberculosis into the herd to its discovery, customers, who were paying twenty cents a quart for this milk to be safe from tuberculosis, were in reality using tuberculous milk without suspecting their danger. Pasteurization would have protected them.

It is from twenty-one years' practical experience that I speak when I commend all efforts to produce clean milk from healthy cows, but recognize that there is really no such thing as raw milk that can be depended upon to be clean and pure and free from disease day after day, even though it be produced with such elaborate precautions that it costs three times as much as the ordinary market milk and is out of reach of all except the wealthy.

Prevention the Word.

Describing the new work of the Tuberculosis Preventorium for Children near Lakewood, N. J., Mr. Straus added:

"Both in this work of taking children from tuberculous surroundings and in pasteurizing the milk supplies so as to stop the infection of the babies with tuberculosis, we have in America methods of prevention that we are earnestly endeavoring to commend to our own people and to the other nations of the world, for we feel that in these measures we have the means by which tuberculosis can be overcome.

What pasteurization has done wherever tried it will do in a larger way when resorted to more generally, and the forty per cent drop in tuberculosis in New York City, when only part of the milk supply was pasteurized, will be paralleled and outdone, and we will make headway against the great white plague, instead of allowing it to destroy our civilization and our race.

"Prevention is the word that I took to Berlin and that I now bring to Rome, and prevention means pasteurization. Upon this the health agencies of the United States government are agreed. This stand is indorsed by the National Association for the Study and Prevention of Tuberculosis and by the American Medical Association, and my message is confirmed by the dean of the American medical profession, Dr. Jacobi, in the words, 'Use no raw milk.'"

THE CHICAGO TRIBUNE BELIEVES:

"That the kind of help given the farmer for his stock should be given him for his family.

"That communities should be helped to banish consumption and typhoid fever.

"That mothers should be protected during child-bearing.

"That the slaughter of the innocents should cease as far as it is possible to make it cease.

"That children should be given a chance to grow up in strength.

"That men should be enabled to labor at high efficiency.

"That prevention should replace cure.

"That pauperizing of men by charity should give place to a scientifically developed scheme for the care of those who need to be cared for along broad economic lines."

IOWA MEDICAL JOURNAL

A Monthly Journal
Devoted to the Interests of the Iowa Profession
E. E. DORR, M. D., Editor and Proprietor
Subscription $2.00 per year, in advance.

"For Sale" and "Want" Ads, $2.00 each insertion. Write for Physician's Cards, $5.00 per year. Advertising Rates.

We request short papers and reports of cases from Iowa Doctors. All papers should be typewritten. Reprints furnished at cost and should be ordered when paper is sent us, as it saves expense.

We want papers from county societies.

OUR PLATFORM.

The Improvement of the Health of Iowa People.

The Improvement in Hygiene Conditions in all Iowa Cities.

The Improvement of the Profession, Individually and Collectively, in the Art and Science of Medicine.

The Improvement in Legislation so as to require High Attainments of every Practician, regardless of his School or Pathy.

The Improvement in Organization, making every legally Registered Physician of Good Standing in his Community a Member of his County and State Society.

Vol. XIX Des Moines, December 15, 1912 No. 6

Our Special Offer.

We have made arrangements with a subscription firm, whereby our friends and patrons are given a very unusual opportunity to secure some of the best periodicals published, at a very nominal fee.

We are endeavoring to interest the practitioners of Iowa in the Iowa Medical Journal, believing that it is something they should have and this inducement ought to attract their attention.

Our old subscribers may renew their subscriptions on this basis if they wish, the new subscription starting at the expiration of the one now running, and the other publications as selected, will begin at once.

We wish every one to look over the offer on ad page 14, as this list has been made up with much care.

Dr. D. J. Glomset, Pathologist of Drake Medical School, has consented to keep our readers informed of recent pathological developments, and this month he contributes a number of interesting notes.

It is our aim to have as many up-to-date medical facts published in the Journal as can be had, and hence medical squibs, reports of cases, and short papers are welcome.

A Side Trip for Those Who Attend the A. M. A.

The Northern Pacific Railroad has planned an excursion to Yellowstone National Park for the members of the A. M. A. who meet in Minneapolis, June 16 to 20, 1913.

It was seven years ago that an Iowa party composed of two special Pullmans, visited the Yellowstone Park enroute to Portland, and the memory of that trip is pleasant.

An opportunity will be offered again next June for those who wish to repeat the excursion, and for those who have not had the opportunity as yet.

A special train leaves Minneapolis, June 20, and returns June 30, and it will, no doubt, be freely patronized by Iowa physicians.

Should Congress Investigate Value of Water of Hot Springs.

Congress now has before it a bill for the appropriation of funds to investigate the physiological and therapeutical value of the water of Hot Springs, Arkansas.

These Springs are on government reservations and are under government control, and it is the most natural thing in the world for the government to wish to know the real value of these waters if it is to continue to recommend their use by protection.

In this age of scientific exactness, it is only fair to those wishing to avail themselves of the waters that they, or their scientific advisers, should be fully informed of what may be expected from their use.

Practical Preventive Medicine.

It is with a feeling of gratification that we announce the establishment of a new department in the Journal—the Department of Practical Preventive Medicine.

A. E. Kepford, State Lecturer on Tuberculosis, has kindly consented to edit this department and offers his first contribution in this issue of the Journal.

We believe our readers will enjoy what a layman, who is making a study of health and social conditions, will have to say.

No medical man ever entered his work with more enthusiasm than has Mr. Kepford entered his, and he is giving the best years of his life to the work.

Latent Tuberculosis.

The theory advanced by Von Behring in 1903, as to the possible latency of tuberculosis, was for a time severely criticized, but accumulated evidence now amply proves his statements.

Hamburger, Von Pirquet, McNeil and others have shown by large series of cases, that as high as 94 per cent of poor children before the age of puberty, react to the subcutaneous tuberculin test. The results obtained by these investigators are so striking that we are compelled to admit the fact that tuberculous infection occurs in childhood, and becomes either quiescent or obsolete. Post mortem evidence practically verifies the large per cent of tuberculin reactions.

Thus Adami compares tuberculous and syphilitic infection, and believes that tuberculosis as well as lues may be divided into primary, secondary and tertiary stages. The primary stage of tuberculosis consists of the infection at some period in childhood, usually with involvement of lymph nodes; the secondary phase includes the acute tuberculous manifestations of children which appear but rarely; while later in life, the tertiary stage may develop as chronic pulmonary tuberculosis of the adult. This conception of the mode of infection in tuberculosis, its latency and its liability to become active subsequent to some marked lowering of resistance, either general or local, gives a valuable basis for prophylactic measures.

There is but little doubt that many of these infections in childhood are of bovine origin, but proof has been lacking, owing to the fact that infections from either source respond to Koch's human tuberculin.

Another valuable point emphasized by recent work is that, as a diagnostic measure, tuberculin has only a limited value; in other words, repeated negative reactions indicate that the patient is non-tuberculous, while a positive reaction frequently is obtained when the process is obsolete. It is evident, however, that in very young children, a positive test is much more helpful than in later life.

Phthisis in childhood is a rare disease and indicates that a tuberculous infection in early life is relatively harmless. The lymphatic system bears the brunt of the attack, and the importance of lymph nodes as filtering agents is proven by the frequency of tuberculous lymph-adenitis, especially of the cervical, mediastinal and mesenteric groups. Tuberculin therapy is indicated in this class of cases, and, in conjunction with general hygienic measures, is of considerable value in diminishing the size of the enlarged lymph nodes and lessening the accompanying constitutional symptoms. J. H. P.

SOCIETY REPORTS.

SCOTT

County Medical Society have arranged with the Women's Clubs of Davenport for a joint meeting at which the subject "Milk" will be discussed. Practical dairy men have been invited to talk on "The Model Dairy" and "Pure Milk from the Standpoint of the Producer." "Certified and Inspected Milk" will be discussed by the members of the profession and the City Council. Ministers and teachers have been invited to attend.

The program is under the direction of Dr. J .V. Littig, Dr. H. M. Becker and Dr. L. W. Littig, and its success is assured.

CHICKASAW

County Medical Society met November 4, in annual session. Papers were read by Dr. I. K. Gardner and Dr. A. Babcock. The election of officers followed. Dr. H. D. Fellows, New Hampton, was elected president; Dr. J. H. McKinney, Lowler, vice-president, and Dr. Paul E. Gardner, New Hampton, secretary.

WAYNE

County Medical Society met in Corydon, November 7, with a large attendance. Following a fine dinner, this program was enacted:

"Differential Diagnosis in Right Abdominal Region".....
.....Dr. W. B. Brock of Corydon

"Exophthalmic Goitre".....Dr. G. H. Sollenbarger of Corydon

Dr. H. T. Smith read a very interesting paper. The officers elected for the coming year are as follows: President, H. T. Smith of Humeston; vice-president, K. R. Huff of Lineville; secretary-treasurer, W. G. Walker of Corydon. Corydon was selected as the meeting place for the next gathering in June.

CALHOUN

County Medical Society met in Manson, November 7, with Dr. Mullarky, who read the paper of the day, on "Tetanus." A good attendance was had. The next meeting will be held in Rockwell City, December 24.

MONONA

County Medical Society met at Castana, Tuesday, December 3rd. Officers were elected for 1913 as follows: President, Dr. E. C. Carhart, Mapleton; vice- president, Dr. J. A. Thomson, Onawa; secretary, Dr. Fred S. Spearman, Whiting; censors, Dr. L. L. Bowie, Moorhead, and Dr. M. F. Minthorn, Castana; delegate to State Society meeting, Dr. M. F. Minthorn, Castana.

AUSTIN FLINT-CEDAR VALLEY

Medical Society met in its twenty-fifth annual session in Ackley, November 5, 1912. The society was organized twenty-five years ago, in Ackley with nine doctors present, today it is one of the leading societies in the state.

The program was a good one and was enjoyed by fifty members. A banquet followed with Dr. T. U. McManus of Waterloo, as toastmaster. Officers elected were president, Dr. Hutchins and secretary, Dr. T. J. Symington.

DES MOINES PATHOLOGICAL

Society had as its guest on November 15, Dr. C. F. Hoover of Cleveland. A number of prominent physicians from other cities in the state were present.

The profession of Des Moines enjoyed the opportunity of hearing a man, who has devoted much time to research work, talk on "Respiratory Ventilation of the Lungs, in Disease and Health."

This was Dr. Hoover's first visit to Des Moines and was in response to an urgent invitation from his old friend Dr. W. L. Bierring, president of the society.

Among the out-of-town physicians were Drs. C. Van Epps, J. T. McClintock, H. J. Prentiss, and C. S. Grant of Iowa City; Dr. M. Kenefick, of Algona; Dr. C. J. Saunders, of Ft. Dodge; Dr. M. N. Voldeng, of Cherokee; Dr. Max Emmert, of Atlantic; Dr. E. T. Edgerly, of Ottumwa; Dr. D. S. Fairchild of Clinton; and Dr. O. F. Parish of Grinnell.

DAVENPORT PATHOLOGICAL CLUB.

Program No. 2—1912-13.

Meetings will be held in the Putnam building, on the second and on the fourth Tuesday of each month, at 8:00 P. M. sharp, and formal papers will be as follows:

1912.

November 26, Lymphatic Infection.....G. F. Harkness
December 10, Ether Anaesthesia.....P. H. Schroeder
December 24, What Is Inflammation.....L. F. Guldner

1913.

January 14, X-Ray Localization.....E. M. Sala
January 28, Psychoanalysis.....T. W. Kemmerer
February 11, Immunity.....H. M. Decker
February 25, Symposium on Tuberculosis of the Genito-Urinary Tract
1. Tuberculosis of the Kidney.....L. W. Littig
2. Tuberculosis of the Bladder and of the Prostate....Wm. Rendleman
3. Tuberculosis of the Epidydymus and Testicle.....G. W. Middleton

March 11, Meningitis.....John V. Littig
March 25, Symposium on Serum and Vaccine Treatment of
1. General Infections.....Lyell Reppert, Muscatine
2. Infections of the Genito-Urinary Tract.....H. M. Decker
3. Local Infections.....L. F. Guldner

April 8.....J. T. Haller

The program for April, May and June will be announced later.

In addition to one formal contribution, every member will present two informal contributions, not to exceed ten minutes each. A carefully studied case report, the presentation of a patient, an abstract of an interesting article in current medical literature, a macroscopic and microscopic study of a pathological specimen, or a report of observations at medical centers will be acceptable as informal contributions. Members whose formal contributions are scheduled to appear after several months are urged to make their informal contributions as soon as possible, as at least two informal contributions are desired each month. Post card reminders will be mailed the Saturday before each meeting.

Signed: Program Committee,
Davenport Pathological Club.

RINGGOLD

County Medical Society held its regular meeting, November 21. After an interesting program, election of officers was held, with the following results:

President, Dr. F. H. Goad of Ellston; vice-president, Dr. O. L. Fullerton of Redding; and secretary-treasurer, Dr. Samuel Bailey of Mt. Ayr.

LINN

County Medical Society held its regular meeting in Cedar Rapids, November 24. About sixty physicians attended and much interest was manifested in the following program.

"Simple Methods of Exposure of the Long Bones".....
.....H. J. Prentiss, Iowa City
"Comminuted Fractures of the Long Bones".....W. Ruml, Cedar Rapids
"Osteomyelitis, Surgical Treatment".....A. B. Poore, Cedar Rapids

BOOK REVIEWS.

NEW ASPECT OF DIABETES.

By Prof. DR. CARL VON NOORDEN, Professor of the First Medical Clinic, Vienna. Lectures delivered at the New York Post Graduate School, New York. Price, $1.50. E. B. Treat and Company, New York, Publishers.

We have had the pleasure of reviewing most of Dr. von Noorden's books in the past few years but none have been more interesting than this one. The present volume covers the lectures given in October of this year at the New York Post Graduate Medical School. The author is a favorite in America and this work will be read with interest and profit.

TEXT-BOOK ON THE PATHOGENIC BACTERIA AND PROTOZOA.

For students of medicine and physicians. By JOSEPH McFARLAND, M. D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. Seventh edition, thoroughly revised. Octavo of 878 pages, 293 illustrations, a number of them in colors. Philadelphia and London. W. B. Saunders Company, 1912. Cloth, $3.50 net.

Perhaps no branch of our science has made such strides in development as has Bacteriology and to the bacteriologist this book, in its seventh edition, will substantiate this statement.

When we consider how little attention this branch commanded twenty years ago and how it is depended upon now in diagnosis, we wonder what possible development in the next twenty years can compare with it.

The author has compiled a treatise here for the student and practitioner that will be greatly appreciated. His laboratory methods deserve emulation and his conclusions challenge investigation.

Those interested in this line of study will be pleased to have this book for a reference and guide.

PRINCIPLES OF HYGIENE.

For students, physicians, and health officers. By D. H. BERGEY, M. D., First Assistant, Laboratory of Hygiene and Assistant Professor of Bacteriology, University of Pennsylvania. Fouth edition thoroughly revised. Octavo of 529 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1912. Cloth, $3.00 net.

In view of the great interest taken in matters of ventilation and sanitary measures by our people, this work ought to find a welcome.

The protection of our water supplies by the destruction of sewage by

cities, towns and private corporations has led to the development of septic tanks, chemical destruction and other methods of handling sewage, so that each community may have the least chance of infection.

This work takes up the latest methods of all scientific preventative hygiene and to those interested, is most instructive and satisfactory.

THE PRACTICE OF GYNECOLOGY.

For practitioners and students. By W. EASTERLY ASHTON, M. D., LL. D., Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Fifth edition, thoroughly revised. Octavo of 1,100 pages, with 1,050 original line drawings. Philadelphia and London. W. B. Saunders Company, 1912. Cloth, $6.50 net; half Morocco, $8.00 net.

The fifth edition of this popular work has just been issued by the Saunders Company. It contains much new and much newly written material.

The use of the X-Ray is given full consideration. The chapter on blood in relation to surgery has been changed to meet present findings. Stock vaccines have been recommended in the treatment for gonorrheal vulvitis in children. The study of "hormone" is given prominence. Operative work, diagnosis, medical treatment and technique are strong features of the work.

DISEASES OF CHILDREN.

A practical treatise on diagnosis and treatment for the use of students and practitioners of medicine. By BENJAMIN KNOX RACHFORD, Professor of Diseases of Children, Ohio-Miami Medical College, Department of Medicine of the University of Cincinnati. D. Appleton and Company, New York and London, Publishers.

Credit for the lessening of infant mortality is due to just such information as the author has outlined in this work. He dwells at length upon the proper diet and surrounding of the infant, and the protection of the child from all contagious and infectious diseases, recommends an excess of fresh air and food as well as school supervision, and recommends physical as well as mental examinations for the school child.

His chapter on infant-feeding is most interesting and contains much common sense.

He outlines, at length, the etiology, symptomotology, diagnosis and treatment of the diseases of childhood in a most thorough and painstaking manner.

In each department of the work, he shows a clear conception of the subject and handles it accurately and interestingly.

THE PRACTICAL MEDICINE SERIES.

Pediatrics.

By ISAAC A. ABT., M. D., Professor of Pediatrics, Northwestern Medical School, and MAY MICHAEL, M. D.; and

Orthopedic Surgery.

By JOHN RIDLON, A. M., M. D., Professor of Orthopedic Surgery, Rush Medical College, and Chas. A. Parker, M. D., series 1912. Price, $1.25. Year Book Company, New York, Publishers.

A year's review of the literature on these subjects with the editor's comments makes a very interesting mass of reading. While there are no revolutionary conditions now from a few years ago, there are many minor

and interesting differences. The general practitioner will find here much to gratify him.

PHYSICIANS VISITING LIST FOR 1913.

Sixty-second year of publication. Price, $1.25. P. Blakiston's Son and Co., Publishers, Philadelphia.

Space for the business part of a doctor's busy life, and pages of Dose Tables, Weights, Measures, etc.

SECOND ANNUAL REPORT STATE CHARITIES COMMISSION, ILLINOIS.

An interesting report on the public institutions can be secured by addressing the State Charities Commission, Springfield, Illinois.

A TEXT-BOOK OF OBSTETRICS.

Including related gynecologic operations. By BARTON COOKE HIRST, M. D., Professor of Obstetrics in the University Pennsylvania. Seventh revised edition. Octavo of 1,013 pages, with 895 illustrations, 53 of them in color. Philadelphia and London. W. B. Saunders Company, 1912. Cloth, $5.00 net; half Morocco, $6.50 net. W. B. Saunders Company, Philadelphia and London, Publishers.

This book is in its seventh edition. Those interested in this subject are familiar with Hirst's Obstetrics, and will welcome the new volume.

Much has been rewritten to simplify the subject and yet every phase of the subject is fully covered.

The consequences of child bearing constitute a very large portion of the diseases of women and because of this the gynecological features are considered in this work.

In this addition also is found a treatise on diseases of the breast. No one has such an opportunity of observation of these diseases as the obstetrician and hence the cause for its discussion in this work.

HIMSELF.

Talks with men concerning themselves. By E. B. LOWRY, M. D., author of "Herself," "Truths," etc.. and RICHARD J. LAMBERT, M. D. Price, $1.00. Forbes and Company, Chicago, Publishers.

This book is a good common sense treatise on life and habits. There is plenty of good advise in it and the book can safely be left in the hands of youths.

DISEASES OF THE STOMACH, INTESTINES AND PANCREAS.

By ROBERT COLEMAN KEMP, M. D., Professor of Gastro-intestinal Diseases, New York School of Clinical Medicine. Second edition, revised and enlarged. Octavo of 1,021 pages, with 388 illustrations. Philadelphia and London, W. B. Saunders Company, 1912. Cloth, $6.50 net; half Morocco, $8.00 net.

This is the second edition of the work and much has been rewritten to bring it up to date.

Chapters on Colon Bacillus Infection and Diseases of the Pancreas have been added and lend much to the work.

Because of intestinal complications and for the purpose of differential diagnosis, the subject of Typhoid Fever is included in the volume.

Etiology receives much consideration and the methods of diagnosis, differential and otherwise are carefully considered. Laboratory methods also receive a due amount of consideration.

THERAPEUTICS, MATERIA MEDICA AND PHARMACY.

By SAM'L. O. L. POTTER, A. M., M. D., M. R. C. P., London. Formerly Professor of the Principles and Practice of Medicine in the Cooper Medical College

of San Francisco. Twelfth edition, revised and enlarged. Price, $5.00 net. P. Blakiston's Son and Company, Philadelphia, Publishers.

This is the twelfth edition and the author's work has covered a period of twenty-six years.

Each revision has incurred an immense amount of energy, as laboratory work has developed new medicines and new combinations.

This issue has 530 additions made to the material already used, and the use of serum is given a prominent place in the author's consideration.

606 and many other compounds receive free and careful consideration.

The author has been considered the leading authority on this subject for many years, and his old readers will appreciate the revised work.

PRACTICAL MEDICINE SERIES.

General Medicine.

By FRANK BILLINGS, A. M., M. D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. SALISBURY, A. M., M. D., Professor of Medicine, Chicago Clinical School. Volume VI of the General Medicine Series of 1912. Price, $1.50. The Year Book Company Publishers, Chicago.

This volume is edited by Drs. Billings and Salisbury and covers the doings of medicine during the last year.

There is much of general interest for the practitioner. Perhaps the most interesting study is that of infectious diseases and vaccine therapy.

MUSCLE SPASM AND DEGENERATION IN INTRATHORACIC INFLAMMATIONS AND LIGHT TOUCH PALPATION.

By FRANCIS MARION POTTENGER, A. M., M. D., LL. D., Medical Director of the Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California. Sixteen illustrations. Price, $2.00. C. V. Mosby Company, St. Louis, Publishers.

As an additional aid in diagnosis of thoracic inflammation, this work will be of interest to the practitioner. Many references to the discoveries of other men, and much valuable investigation of the author along this line, are given.

INTERNAL MEDICINE.

By DAVID BOVAIRD, JR., A. B., M. D., Assistant Professor of Clinical Medicine in the College of Physicians and Surgeons, Columbia University; associate visiting physician of the Presbyterian Hospital, and visiting physician of the Seaside Hospital, New York City. One Hundred nine illustrations and seven colored plates. Price, $5.00. J. B. Lippincott, Philadelphia, Publishers.

The author has endeavored to cover the subject in a single volume. He recognizes that the shorter volumes on this work are little better than catalogues, and that the complete works are too long and full of technique and history.

As a teacher, he has tried to supply a need for concise and complete study of medical subjects.

The handling of the infectious and contagious diseases is along the lines of present day acceptance, and he reserves the privilege of accepting new laboratory findings in their relation to classification of diseases.

MEDICAL NEWS NOTES.

Dr. F. J. Langenhorst has left Ashton for an extended vacation.

The Seraphic Heights Hospital of Waterloo, was dedicated December 4.

Dr. W. F. Dean of Osceola, recently took a post graduate course in Chicago.

Dr. and Mrs. J. Fred Clarke of Fairfield, have returned from their eastern trip.

Dr. C. E. Hoover of Hamburg, has been taking post graduate work in Chicago.

Dr. and Mrs. H. E. Nelson of Dayton, are spending the winter in California.

Dr. and Mrs. M. R. Waggoner of De Witt, have gone to Florida for the winter.

Dr. Wm. H. Bickley of Waterloo, has returned from his extended tour of Europe.

Dr. and Mrs. Robt. H. Sutton of Shenandoah, are spending the winter in California.

Dr. J. L. Parker of Charles City, recently bought a new six-cylinder Chalmers car.

Dr. P. E. Stuart of Nashua, has exchanged his runabout for an Oakland touring car.

Dr. F. E. McGlone of Mason City, was reported ill with La Grippe, in November.

Dr. H. A. Minassian and family of Des Moines, have returned from a ten days outing.

Dr. and Mrs. W. W. Bowen of Ft. Dodge, have been enjoying an extended visit in the east.

Dr. W. Ruml of Cedar Rapids, attended the Clinical Congress in New York, in November.

Dr. and Mrs. R. U. Chapman of Des Moines, have returned from a two weeks visit in the east.

Dr. Clarence Steelsmith of Melvin, has been elected to the legislature from Osceola County.

Dr. Geo. Cullen of Des Moines, has returned from a two months post-graduate course in New York.

Dr. and Mrs. W. C. Hand of Hartley, spent a couple of weeks in New York City, during November.

The Lane Medical Library of the Leland Stanford Junior University was dedicated, November 3.

Dr. J. N. Warren of Sioux City, recently underwent an operation at the Samaritan Hospital.

Dr. Robt. Q. Rowse of Sioux City, attended the Clinical Congress in New York City, as an Iowa delegate.

Dr. J. W. Lauder of Afton, is suffering with a broken arm, the result of a kick from the crank of his auto.

Dr. Will O. Smouse of Des Moines, has gone to Germany to investigate the newly discovered tuberculosis cure.

Dr. and Mrs. J. W. Davis of Lansing, enjoyed a visit in November with the doctor's parents at Retreat, Wisconsin.

Dr. Thos. P. Bond of Des Moines, attended the Clinical Congress of the Surgeons of North America, in New York.

Dr. J. N. McCoy of Corydon, has received an appointment as local physician and surgeon for the short line at that place.

Dr. C. A. Hillweg and family of Corning, have gone to Chicago, where the doctor expects to find relief from his ill-health.

Dr. T. J. Houlihan of Ida Grove, is taking post graduate work in Chicago. Dr. E. C. Heilman is looking after his practice.

Dr. C. O. Yenerich of Rockford is recovering from an attack of blood poisoning, caused by running a rusty nail into his hand.

Dr. A. P. Stoner of Des Moines, was a delegate from Iowa to the Clinical Congress of Physicians and Surgeons, in New York City.

Dr. N. D. Wilson of Manchester, is taking extensive post graduate work in Atlanta, Georgia. His practice is in the hands of Dr. B. H. Byers.

Dr. W. J. Bradley of Cedar Rapids, attended the Clinical Congress of Surgeons in New York. Mrs. Bradley accompanied the doctor.

Drs. L. W. Littig, Frederick Lambach and G. F. Harkness of Davenport, attended the Clinical Congress of Surgeons in New York, in November.

Dr. and Mrs. Frank T. Hartman of Waterloo, went to New York City, in November, where the doctor attended the Congress of Physicians and Surgeons.

Dr. S. S. Spicer of Cedar Rapids, is recovering from an attack of blood poisoning. Dr. Spicer cut his thumb while performing an operation and it became infected.

Drs. M. L. Turner, R. L. Parker, C. E. Ruth and W. E. Vest, all of Des Moines, have been appointed members of the new medical board of the Iowa Methodist Hospital.

Dr. F. A. Ely of Des Moines, returned from Europe December 10, after spending three months in Vienna, studying the pathology of the nervous system, nervous diseases and internal medicine.